## EXHIBIT 1 FILED UNDER SEAL

## In the Matter Of:

In Re: Pork Antitrust Litigation

MICHAEL WILLIAMS, PH.D.

June 21, 2022



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1	VOLUME 1	1
2	PAGES: 1-303 EXHIBITS: See Index	
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4	UNITED STATES DISTRICT COURT FOR THE DISTRICT OF MINNESOTA	
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6	IN RE: ) No. 0:18-cv-01776-JRT-HB	
7	PORK ANTITRUST LITIGATION )	
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13	VIDEOTAPED DEPOSITION of	
14	MICHAEL A. WILLIAMS, PH.D.	
15	- CONDUCTED BY VIDEOCONFERENCE -	
16	Tuesday, June 21, 2022	
17	8:01 a.m. Pacific Daylight Time	
18		
19		
20		
21		
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     I'm getting at. Are you assuming that the
     defendants used each of the alleged mechanisms in
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     each year of the alleged conspiracy?
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            MR. FINLEY:
                         Objection, form, and on the
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     basis of expert stipulation.
         A. Well, again, just coming back to the first
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     sentence in Paragraph 12, I have assumed that "For
     the purpose of estimating overpayments, if any,
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     caused by the Defendants' alleged conspiracy, " I
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     have assumed, as any damage expert must, that the
     allegations in the complaint are true.
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            So obviously the complaint speaks for
     itself about what the allegations are. My report
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     doesn't contain a specific statement about the
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     question you just raised.
            But if it would be considered as part of
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     the allegations in the complaint pertaining to the
     alleged conspiracy, then again, I have, as any
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     damage expert must, assumed for purposes of
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     calculating overpayments that those allegations
     are correct.
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         Q. For purposes of calculating overpayments
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     in 2016, what conduct did you assume defendants
     engaged in that impacted prices that year?
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            MR. FINLEY:
                         Objection, lack of
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foundation.

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- A. Yeah. So my overcharge regression doesn't have a specific overcharge for 2016.
- It has -- as you mentioned earlier, it has
  a dummy variable that answers the question of
  whether or not there is or is not a statistically
  significant difference between actual prices and
  but-for prices over the period January 2009 to
  June 2018.

So my report doesn't offer a specific opinion on the subject of your question.

- Q. Your report doesn't offer a specific opinion on whether there was an overcharge in 2015 either. Correct?
  - A. Yeah.
- MR. FINLEY: Hold on. Objection, you may have mischaracterized prior testimony.
  - A. My report does not offer different overcharge estimates for different years within the damages period.
  - Q. It's also true your report doesn't offer an overcharge estimate for the period June of 2014 through June of 2018. Correct?
- 24 MR. FINLEY: Same objection.
  - A. It does not offer a separate estimate of

- any alleged -- of any possible overcharge,
  assuming any existed. It doesn't offer a specific
  estimate of an overcharge in that time period.
  That is correct.
- Q. And you're not making any assumptions about defendants' actual conduct between June of 2014 and June of 2018 other than what's specifically stated in the complaint. Correct?

  MR. FINLEY: Objection, form.
  - A. Your question was a little vague.

But again, I'll just come back again to the first sentence in Paragraph 12. "For the purpose of estimating overpayment, if any, caused by the Defendants' alleged conspiracy."

And that conspiracy is alleged to have existed between -- at least the damages, between January 2009 and June 2018.

And I have -- as I've said several times now, I have assumed, as any damage expert must, that the allegations in the complaint are true.

- Q. Yeah. And so that's what I'm trying to get at. So for 2016, just to pick a year, what are you assuming the defendants did that then led to the overcharge you purport to measure?
- MR. FINLEY: Objection, asked and

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answered, lack of foundation.

- A. Yeah. I'm assuming that in 2016 the defendants engaged in the conduct that's alleged in the complaint as it relates to conduct that allegedly supported the claimed conspiracy.
- Q. Are you assuming that all decreases in sow inventory between January of 2009 and June of 2018 were a result of the alleged conspiracy?
- MR. FINLEY: Hold on. And objection,
  form, also on the basis of expert stipulation.
  This is something possibly considered, not
  necessarily relied on.
- A. My report doesn't offer such an opinion.

  My report doesn't make such. It doesn't have a statement about that.
- Q. Are you assuming that all decreases in hog production between January of 2009 and June of 2018 were a result of the conspiracy?

19 MR. FINLEY: Same objection.

- A. Again, the -- I mean, the complaint speaks for itself. So I'm assuming that the allegations in the complaint are true as it pertains to those allegations that are relevant to the alleged conspiracy.
  - I don't specifically recall right now if

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- Paragraphs 70 through 76. But in particular, to
  Table 2 on page 37, which reports the "U.S. Daily
  Hog Slaughter Capacity, 2009-2020, by Company,"
  and separates the defendants from others and
  reports defendants' market share in the last row
- Q. As measured by hog slaughter capacity.

  8 Correct?
  - A. That is correct.

of the table.

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- Q. What were defendants' market shares for hog production during these years?
- A. I don't believe that's contained in my report. And the reason would be, if you look at Paragraph 71 and in particular the article by my former colleague Greg Werden, I believe that the capacity provides -- for antitrust purposes provides a better estimate of market concentration.
- Q. I get that. I'll sort of take that point for now as it relates to pork processing.
- My question is upstream for hog production. Your report contains no analysis of defendants' market shares in the upstream market for hog production. Correct?
  - A. I don't recall that.

1 Q. Back to the phrase "upstream vertical control" as you use it in your report. 2 mean control about -- control over decisions about 3 4 sow inventories? 5 MR. FINLEY: Objection, form. A. Well, it means what I've stated in 6 7 Paragraphs 37 through 55. So that's -- you asked me earlier where have I discussed issues that 8 relate to upstream vertical control. 9 And the 10 answer is in Paragraphs 37 through 55. Q. And those paragraphs don't say anything 11 12 about control over sow inventory. 13 So is it fair to say you are not opining 14 that defendants exercised control over nondefendants' decisions about sow inventories? 15 16 MR. FINLEY: Objection, form. A. I'm not going to take the time right now 17 to read everything in 37 through 55. 18 19 I don't recall those paragraphs specifically talking about the issue you're 20 discussing right now. So I'd say -- assuming 21 22 that's correct, I would say my report doesn't 23 offer an opinion.

to produce.

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Q. And then same question about how many hogs

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Is it fair to say your report contains no opinion that defendants controlled nondefendant companies' decisions about how many hogs to produce?

MR. FINLEY: Objection, form.

- A. I don't recall my report offering an opinion on that.
- Q. Is it fair to say that none of your opinions turn on whether the defendants actually controlled a majority of U.S. hog production between 2009 and June of 2018?
- A. Well, the -- you asked me earlier where was the discussion of upstream vertical control, and my answer was Paragraphs 37 through 55.

So those paragraphs discuss facts related to, for example, the changing vertical nature of the industry over time. So I would say that unless -- these are just factual statements that I've made about the industry background. I'm not aware of any errors in them right now. If there were, I'd want to correct them.

Q. I guess what I'm trying to get at is what you're assuming and what you're opining on.

Do your opinions turn on whether or to what extent defendants controlled the number of

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sows in production at any point in time between 2009 and June 2018?

A. Well, the opinions that are expressed in Paragraphs 37 through 55, to the extent that they cover that, again, these are my opinions based on my understanding of the facts of the industry as it pertains to the consolidation and specialization of farming operations and as it pertains to hog farming and the fact that hog farming and hog packing have become increasingly vertically integrated.

As I said, these -- I'm not aware of any errors in these paragraphs on industry background. If there were, I'd certainly want to correct them.

Q. Let's just take a look at maybe a few examples. Before we get into the paragraphs you were discussing, if you could just turn back to Paragraph 24, which is on page 12.

You can read the whole paragraph, if you want. I'm just going to ask you about the last sentence.

- A. Sure. If you could just give me a moment.
- 23 Q. Absolutely.

- A. Yes. I've read the paragraph.
  - Q. In the last sentence you say, "Because of

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their high degree of vertical integration (either 1 by ownership or by contract), pork packing and 2 processing firms are also referred to as pork 3 4 integrators." 5 Did I read that correctly?

- A. I believe so.

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- Q. What do you mean by "vertical integration"?
- A. Well, it's described right above. sentence kind of halfway down the paragraph, it starts, "First, due to vertical integration, many packers now own the hog farms that supply their packing operations. Second, independently owned hog farms now primarily operate under long-term contracts with packers to which they supply finished hogs directly."

So those would be two examples of vertical integration.

Q. So my client, Seaboard, over the years has had contracts to buy hogs from Prestage, which is one of the companies I asked you about before.

Assuming that that's true, assuming my representation is true, in your view, does that mean Seaboard is vertically integrated with Prestage?

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MR. FINLEY: And objection, scope.

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A. If I understand your representation,
Seaboard doesn't own Prestage. So I would say
they're not vertically integrated in the sense
that's described in the sentence that I read a
moment ago that begins, "First, due to vertical
integration, many packers now own the hog farms
that supply their packing operations."

But it sounds like, if I understand your representation, you're saying that there is a contract -- I don't know if it's short-term, long-term, but you're saying there is a contract or contracts between Seaboard and Prestage.

And so that's a kind of vertical integration. It's a contractual vertical integration. It's not an ownership vertical integration.

- Q. I suppose to understand the rights and obligations Seaboard and Prestage would have relative to each other, you'd have to read the contract. Right?
- 22 MR. FINLEY: Objection, calls for a legal 23 conclusion, calls for speculation.
- A. Yeah. I haven't -- I'm not an attorney.
- 25 | I'm not -- my report doesn't offer any opinions

about the contractual relationship between Seaboard and Prestage.

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Q. You're not opining that by virtue of that contractual relationship Seaboard was able to control how many sows Prestage maintained in its sow farms. Correct?

MR. FINLEY: Objection to form.

- A. My report does not offer such an opinion.
- Q. And your report doesn't offer an opinion that, to stick with this example, Seaboard by virtue of its contract with Prestage was able to control how many hogs Prestage produced at any point in time. Correct?

MR. FINLEY: Objection to form.

- A. My report doesn't offer such an opinion.
- Q. Stepping outside of that example, it's also true your report doesn't offer any opinion that any defendant by virtue of a contract with an independent producer was able to control how many sows that producer maintained in its sow farms.

  Correct?
  - MR. FINLEY: Objection, vague, ambiguous.
- A. I don't recall my report offering such an opinion.
  - Q. And your report also doesn't offer an

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55 opinion that any defendant by virtue of a contract 1 with an independent producer was able to control 2 how many hogs that independent producer raised. 3 4 Correct? 5 MR. FINLEY: Objection, form, vague, 6 ambiguous. 7 A. Yeah. I don't recall my report offering 8 such an opinion. Q. Would you turn to Paragraph 42 of your 9 10 report. That's on page 19. A. Yes, sir. I'm there. 11 12 Q. It says in 2009, in the last sentence, 13 "130 farms that had 50,000 or more pigs accounted 14 for 56.7% of the nationwide inventory." 15 Did I read that right? 16 A. Well, you started in the middle of the sentence. 17 18 Q. Yeah. Let me break it up. 19 So this paragraph refers to information 20 about 2009. Correct? A. Yes, sir. 21 O. And the last sentence reads, "On the other 22 23 hand, 130 farms that had 50,000 or more pigs accounted for 56.7% of the nationwide inventory." 24 25 Did I read that correctly?

A. You did.

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- Q. Do you know about how many of these 130 farms were owned by defendants?
- 4 MR. FINLEY: Objection, form.
- A. I don't -- my report doesn't offer that opinion. I don't recall it right now.
- Q. Do you have just a ballpark? Do you know if it was 10 farms versus 120 farms?
- 9 MR. FINLEY: Well, objection on the basis
  10 of the expert stipulation, asking him about
  11 knowledge, preliminary work product, these kinds
- 12 of things here.
- 13 A. I don't recall.
- Q. If you'd turn to Paragraph 47. It's on page 21. And then Figure 4, which is on the next page.
- Paragraph 47 reads, "According to the
  USDA's Agricultural Resource Management Survey
  (ARMS), by 2020 the share of hog production
  operating under contract increased to nearly 70%
- 22 Did I read that correctly?

as shown in Figure 4 below."

23 A. I believe so.

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Q. And the paragraph above, in Paragraph 46 there's a reference to two different types of

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given Defendants a significant degree of control 1 over hog farming production." 2 Did I read that right? 3 4 A. I believe so. 5 Q. And what do you mean by "significant 6 degree of control"? 7 A. Well, it would be the -- again, this would be the discussion generally in 37 through 55, 8 particularly in 44 through 55. 9 10 But that the graph shows a substantial increase in U.S. hog production operating under 11 12 contract. And so that's the graph that I was 13 referring to when I wrote the sentence that 14 appears -- the first sentence in 48. 15 Q. And just to be clear, sitting here today, 16 you don't know whether the graph in Figure 4 is measuring contracts between defendants and third 17 parties exclusively or if it also includes 18 19 contracts between nondefendant hog producers and 20 the hog farmers? Objection, form, compound. 21 MR. FINLEY: 22 I would have to go back and A. Yeah. 23 double-check the source. Q. And when you say "significant degree of 24

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control over hog" . . . "production," just to make

sure I understand this correctly, you're not -- by "significant degree of" -- let me withdraw that and start over. By "significant degree of control over hog farming production," you do not mean control over nondefendants' decisions about how many sows to have on their sow farms. Correct? Objection, form. MR. FINLEY: A. I don't recall my report offering an opinion about that. Q. And it's also the case that "significant degree of control over hog farming production" does not mean defendants have control over nondefendants' decisions about how many hogs to raise. Correct? Objection, form. MR. FINLEY:

- A. Yeah. Again, I don't specifically recall my report offering an opinion about that.
- Q. Let's take Tyson as an example, if you could turn to Paragraph 52.

Paragraph 52 reads, "In 2017, Tyson reported that the 'majority of our live hog supply is obtained through various procurement relationships with independent producers.'"

Did I read that right?

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A. I believe so.

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Q. Did you, for purposes of forming your opinions in this case, rely on any of Tyson's contracts with outside hog producers? Sorry. Let me strike that.

Did you, for purposes of your opinions in this case, rely on any of Tyson's contracts with independent producers?

MR. FINLEY: Objection, form.

A. I'm not sure if I understand the question.

I mean, the sentence that you read in Paragraph 52 is a statement about -- well, it's a quote from Tyson about their contractual relationships with independent producers.

Q. Okay. I'm asking -- well, let me ask a simpler question.

Did you review any of Tyson's contracts with independent producers?

MR. FINLEY: And objection based on the expert stip to the extent this is considered but not relied upon.

So you may answer about whether rely upon, not whether just considered.

A. My report doesn't rely on any such contracts.

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1 Q. Are you aware of any instance in which 2 Tyson instructed an independent producer to grow fewer hogs? 3 4 MR. FINLEY: Same objection. 5 A. I don't believe my report contains --6 offers such an opinion. Q. For any defendants, does your report offer 7 an opinion -- well, let me restart. 8 Does your report offer an opinion that any 9 10 defendants instructed an independent producer to grow fewer hogs? 11 12 Objection, form. MR. FINLEY: A. I don't recall that opinion being in my 13 14 report. 15 Q. Does your report offer an opinion that any defendant instructed an independent producer to 16 forgo a contemplated expansion? 17 Objection, form. 18 MR. FINLEY: 19 A. I don't recall my report offering such an 20 opinion. Q. Are you relying on any of the marketing 21 22 contracts between any defendant and any independent, let me say, nondefendant hog producer 23 for your opinions in this case? 24 25 MR. FINLEY: Objection, form.

A. I don't recall that.

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You know, the -- as I'm sure you're aware,
the documents I have relied on are listed in
Appendix II. But I don't specifically recall such
a contract being in Appendix II.

- Q. Can you identify any instance between 2009 and June of 2018 where a defendant prevented an independent hog producer from growing more hogs?
- MR. FINLEY: And objection on the basis of the expert stip to the extent this is asking for materials considered but not relied upon.

And so you can answer to the extent you relied on these materials.

- A. Yeah. I don't believe my report relies on such materials. I don't recall that.
- Q. And you're not willing to testify whether you're aware of any such instance?
- 18 MR. FINLEY: Same objection, same 19 instruction.
- 20 A. Yeah. I'll answer the same way. My
  21 reports doesn't rely on any such evidence.
  - Q. And so is it fair to say that none of your opinions turn on whether any defendant ever instructed any nondefendant hog producer to grow fewer hogs?

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A. Well, as we've talked about on several occasions now, the first sentence of Paragraph 12 says, "For the purposes of estimating overpayments, if any, caused by Defendants' alleged conspiracy, I have assumed the allegations in the Complaint are true."

Again, that's what any damage expert is obligated to do.

And then there are two regressions in my report: One is an overcharge regression, and one is a production regression.

And those regressions ask whether or not given the, as you said, nonconspiratorial factors, in particular supply and demand factors, whether or not in the output regression whether or not actual output is lower than but-for output, and then in the overcharge regression, whether or not actual prices exceed but-for prices.

Again, there's no assumption that there's any difference between actual output and but-for output, and there's no assumption that there's any difference between actual prices and but-for prices.

It's an empirical question, which is investigated in the regression -- in the

1 production regression in Table 3 and the 2 overcharge regression in Table 4. Q. And none of your regressions estimates 3 4 what the volumes of export sales would have been 5 but for the alleged conspiracy. Correct? MR. FINLEY: Objection, form. 6 A. That is correct. There is no -- as I said 7 earlier, there's no export variable in the 8 overcharge regression; neither is there an export 9 10 variable in the production regression. Q. Let's take a look at page 29 of your 11 12 report, Figure 6. This figure is titled "Total 13 U.S." . . . "Net Exports and Net Exports as a 14 Share of Production, 2000-2020 (by Weight)." 15 Did I get that right? 16 You actually left out the most important word. You left out the word "Pork." 17 But otherwise, you got it right. 18 19 Q. Okay. I'll own that one. 20 This figure portrays "Total U.S. Pork Net Exports and Net Exports as a Share of Production, 21 22 2000-2020 (by Weight)." Correct? A. I believe that is correct. 23 Q. For purposes of this figure, how did you 24

calculate net exports?

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A. Well, I would -- I'd want to double-check the source. And as I'm sure you're aware, we gave you all of the backup for our report. So I would just want to double-check those things.

Correct?

But my recollection is it would be exports minus imports.

- Q. And the exports and imports you're referring to would be of all pork products.
- A. Again, the answer is an empirical one. It would be contained in that source. That's what the title to the table says. That would be --
- Q. Do you recall -- I'm sorry. Go ahead and finish.
  - A. I'm sorry. I was just saying that's what the title -- the title to the table says "Pork." It doesn't specify any particular pork products. But again, the source would answer the question.
  - Q. Do you know, sitting here today, whether this figure -- whether the net exports depicted in this figure include exports of products that fall outside of the class definition?
  - A. I don't recall that right now. I would have to double-check the source.
    - Q. So sitting here today, you don't know

June 21, 2022 77 1 Illinois Brick states, and then using the pass-through information and other information 2 that's discussed in Sections IV and V to come up 3 4 with the estimate of damages, which is in 5 Table 12. But those discussions don't specifically 6 7 rely on Figure 6. O. You're not opining that the members of the 8 commercial and institutional indirect purchaser 9 10 class paid higher prices for pork as a result of increases in exports? 11 12 And objection, vaque, MR. FINLEY: 13 ambiguous, calls for speculation, calls for a 14 legal conclusion. We talked earlier about the 15 A. Yeah. overcharge regression, which is in a sense the 16 beginning of the damage calculation. 17 And there is no variable in that 18 19 overcharge regression which appears in Table 4, 20 there is no variable in there for exports, so there's not -- certainly no direct connection 21 22 between Figure 6 and the estimated overcharge. 23 And then as I mentioned a moment ago, the actual calculation of damages, which of course 24

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goes through a number of steps to get to the

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- relevant volume of commerce, is in a sense affected by exports, but it's really looking at the domestic sales of the relevant pork products.
- Q. Are you offering an opinion that increases in exports resulted in higher prices for members of the class during the period 2009 to June 2018?
- 7 MR. FINLEY: Objection to form, vague, 8 ambiguous.
- 9 A. No. I don't believe my report says that.

  10 Again, as we've talked about, Table 4 does not

  11 have a variable for exports.
- Q. Let's take a look at Paragraph 62 of your report, which is on page 31.
  - A. Yes. I'm here.
  - Q. And this paragraph -- well, the header above this paragraph is "Events affecting pork exports." Correct?
  - A. That is correct.
    - Q. And then in Paragraph 62 you wrote, "Net U.S. pork exports increased during 2000 through 2020, this increase was not uniform."
- 23 A. You did.

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Q. And then you say, "As Figure 6 above shows, net exports fell in some years (2009 and

- 2013-2015) before rebounding later." 1
- Did I read that right? 2
- A. You did. 3
- 4 Q. And then you wrote, "These temporary 5 decreases in exports are often due to factors and events outside of the control of U.S. pork 6 7 producers and pork processors."
  - Did I read that correctly?
- A. Yes, you did. 9

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- 10 Q. And it's in your report. I take it you agree with that statement? 11
- 12 A. Yes, I agree.

reported:

- 13 Q. And then you quote from the USDA. 14 say, "For example, in April 2009, the USDA
- "'Deterioration in the global economic 16 situation, restrictive trade policies, the 17 stronger U.S. dollar and changing market 18 19 conditions, are among the reasons for falling 20 demand in some major importing countries.'"
- 21 Did I read that right?
- 22 A. You did.
- Q. And then you say, "This decline was 23 transitory, and international meat trade rebounded 24 in 2010, benefitting U.S." . . . "exporters." 25

- 1 opinion.
- Q. Dr. Singer submitted a report in this
- 3 | matter. And he wrote -- this is a quote from his
- 4 report. I'd like your reaction. He wrote, "A
- 5 | firm's decision to export is not itself evidence
- 6 of a conspiracy."
- 7 Do you agree with that statement?
- 8 MR. FINLEY: Hold on. Objection. Is this
- 9 document before the witness?
- 10 MR. SCHWINGLER: It is not.
- 11 MR. FINLEY: Okay.
- 12 A. I've never read Dr. Singer's report. I
- 13 | don't know what's in it. I don't have any
- 14 particular reason to agree or disagree with that
- 15 | sentence. I've never seen it before.
- 16 Q. All right. So let's forget about
- 17 Dr. Singer for a moment. I'm just going to ask
- 18 | for your reaction to the following statement,
- 19 | whether you disagree or agree.
- 20 The statement is, "A firm's decision to
- 21 | export is not itself evidence of a conspiracy."
- 22 Do you agree?
- MR. FINLEY: Objection, form, calls for
- 24 | speculation.
- 25 A. Well, my report doesn't offer a specific

opinion along those lines.

But if the question was, would a firm's decision to export some specific quantity of widgets by itself be evidence of collusion, I think in the abstract I would say no.

There's obviously -- there's a lot -- the context would certainly matter. If that's the only thing I knew about the widget industry, that some firm had made a decision about how much to export and I didn't know anything else, I would say that -- I wouldn't particularly regard that as evidence of collusion.

Q. I'll give you another statement and you can agree or disagree.

The statement is, "A firm's individual decision to sell into foreign markets could be perfectly rational in a competitive environment."

Do you agree with that?

MR. FINLEY: Same objection. Is this referencing the Singer report?

MR. SCHWINGLER: It is a quote from the Singer report, but my question is not about the Singer report. It's whether the witness agrees with that statement.

MR. FINLEY: Then objection on the basis

of scope and expert stip to the extent that this may have been considered but not relied upon.

A. Well, I'll just say again, I've never read Dr. Singer's report. I don't know what's in it.

I don't know anything about the context of any particular sentence that's in it.

But if -- just that sentence by itself and just thinking about some abstract widget industry, if that's the only thing I knew about the widget industry in the absence of any other facts about the structure of conduct about that industry, I wouldn't think that that would be particularly indicative of collusion.

- Q. To analyze whether an export was indicative of collusion, you'd need to analyze the context behind that decision. Correct?
- A. My report doesn't offer any opinions about exports in collusion. It's just not something -- it's not an opinion I'm offering in my report.
- Q. And you may have just answered my question, but if you'll bear with me. If you could turn to Paragraph 7. In 7 and 8 -- actually, I'll just have you look at Paragraph 8, 8 through 13, which summarizes your opinions.
  - A. If I could have just a moment to refresh

my recollection.

- Q. Absolutely.
- A. Okay. I've reread those paragraphs.
- Q. And so first of all, am I correct that
  Paragraphs 8 through 13 summarize the opinions
  you're offering in this case?
- A. Well, yes, subject to -- I'm sure you read it, but the second sentence in Paragraph 8 specifically says, "The following summary does not reflect all of my findings and conclusions or all of the bases for those findings and conclusions."

Subject to that statement, then yes, this was described in my report in Subsection C as an overview of my opinions.

- Q. And none of the items in Paragraphs 8 through 13 refer to exports. Correct?
- A. I believe that's correct. The word
  "exports" does not appear in Paragraphs 8 through
  13.
- Q. And more generally, your report does not contain an analysis of whether economic evidence supports an inference that defendants increased their exports as part of the alleged conspiracy. Correct?
  - A. My report does not contain such an

opinion.

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- Q. If you look at Subsection III.B., which starts on page 66 of your report -- I believe that's III.B. Let me confirm. Yes.
- Subsection III.B. on page 66. The header reads, "Defendants took actions that were against their independent self-interests but for the existence of a conspiracy." Correct?
  - That's what the heading says. A. Yes.
- O. And the section that follows identifies what you describe as actions against defendants' unilateral self-interest. Correct?
  - A. No, I wouldn't state it that way.
- Q. How would you state it?
  - A. I would state it that it describes actions that the defendants took that were against their independent self-interests but for the existence of a conspiracy.
- Q. And that section doesn't address export activity. Correct?
- A. If I could have just a moment to refresh 21 22 my recollection.
- 23 So I have quickly scanned Paragraphs 128 24 to 201, which constitute the Subsection B, and I don't see any discussion of exports. 25

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1 Q. So you don't in your report identify any export sale that you believe was against the 2 seller's unilateral self-interest absent a 3 4 conspiracy. Correct? 5 MR. FINLEY: Objection, form, calls for a legal conclusion. 6 7 A. Well, I don't see a discussion of that in Paragraphs 128 to 201. 8 Q. I know it's a lengthy document. 9 But you 10 don't recall any examples elsewhere in your report, sitting here today. Is that fair? 11 12 A. That is fair. 13 Q. And your report doesn't contain an 14 estimate of the total volume of exports that were against the seller's unilateral self-interest 15 16 absent a conspiracy. Correct? 17 A. I don't believe it does. Q. And your opinions about class 18 19 certification do not rely on any assumption or 20 opinion about whether defendants actually exported pork against their unilateral self-interest absent 21 22 a conspiracy. Correct? 23 MR. FINLEY: Objection to form, calls for 24 a legal conclusion.

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I was going to say, it seems to be

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1 Q. So, Dr. Williams, I'd like to spend some 2 time on the production regression in your report. And if you could turn to page -- so 3 4 Exhibit 1, Paragraph 144, which is on page 72. 5 And so I'd like to talk about -- well, let's just 6 go sentence by sentence. 7 So first you write, "Defendant production can be influenced by non-collusive market 8 conditions in addition to the alleged conspiracy." 9 10 Is that right? A. Yes. You read that correctly. 11 12 Q. And then you wrote, "For example, 13 increasing consumer demand for pork over time 14 could incentivize greater pork production." 15 Did I read that right? 16 A. Yes, you did. 17 Q. And then you say, "Consequently, an increase in industry-wide pork production does not 18 constitute evidence inconsistent with the 19 20 existence of the alleged conspiracy." Did I read that correctly? 21 22 A. Yes, you did. 23 Q. And then you say, "The relevant question 24 in this regard is whether or not actual pork production was lower than it would have been but 25

for the alleged conspiracy."

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Did I read that correctly?

- A. Yes, you did.
- Q. Does your regression model answer that question?
- A. Yes, it does. It answers other questions as well, but it answers that question.
- Q. My understanding of your regression model is that the dependent variable is quarterly pork production net of net exports. Is that right?
- A. Yes. I believe you're looking at Paragraph 151.
- Q. Yes. So you're not -- your model is not analyzing slaughter levels. It's analyzing pork production net of net exports. Correct?
- A. That is correct.
- 17 | Q. So I'll ask the question again.

You wrote in your report, "The relevant question in this regard is whether or not actual pork production was lower than it would have been but for the alleged conspiracy."

Does your regression model measure actual pork production?

A. It measures exactly what's in Paragraph 151.

1 Q. Which is pork production net of net 2 exports. Correct? 3 A. Correct. 4 Q. So in order to know whether actual pork 5 production changed, you would first have to add 6 the net exports back in. Correct? 7 MR. FINLEY: Objection, form, calls for 8 speculation. A. Well, I suppose one could do that. 9 That's 10 not what I've measured -- that's not what I've utilized as the dependent variable in the 11 12 production regression. 13 Q. Is a better term for what you're using 14 "domestic pork supply" as opposed to "actual pork 15 production"? Objection to form. 16 MR. FINLEY: A. I didn't use that phrase. 17 I'm comfortable 18 with the language that's in Paragraph 151. 19 Q. I'm asking -- sorry -- a different question. 20 When you say "The relevant question" -- in 21 Paragraph 144, when you say, "The relevant 22 question in this regard is whether or not actual 23 pork production was lower than it would have been 24 but for the alleged conspiracy, " would it be more 25

1 consistent with your opinions and your work in this case to replace the phrase "actual pork 2 production" with another phrase, whether it's 3 4 "pork production net of net exports" or "domestic 5 pork supply"? I'm just trying to make sure I understand 6 7 what you're really saying in Paragraph 144. Objection to form. 8 MR. FINLEY: A. I don't have any reason to change the 9 10 language in 144. As I said, I think the right dependent variable is the dependent variable 11 12 specified in Paragraph 151. 13 We'll get to that. Q. Okay. 14 So you're, I guess, standing by the 15 opinion that the relevant question is whether or 16 not actual pork production was lower than it would have been but for the alleged conspiracy --17 18 MR. FINLEY: Objection. 19 Q. -- if I'm understanding you correctly? 20 A. I don't have any particular reason right now to change what I stated in Paragraph 144. 21 And then, as I said, I believe that the 22 23 relevant dependent variable for analyzing that is

the dependent variable specified in Paragraph 151.

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1 the expert stip to the extent this is calling for factors considered as opposed to information 2 material to rely upon. 3 4 A. Well, if we go back for a moment to 5 Paragraph 218 -- and I won't repeat the long 6 answers I've just given you about the damages 7 period. But the benchmark period is going to be 8 before the damages period. 9 So it's going to be 10 before January 1st, 2009. And as I say in Paragraph 218 -- I'll just 11 12 read here -- "For the benchmark period, I use all 13 the available data for the period before 14 January 2009. Specifically, data in the benchmark 15 period used for my regression analysis covers the period January 2005 through December 2008." 16 Q. My question -- I understand the benchmarks 17 18

are the same I believe for the two models.

But why did you only go back to 2005 for the production regression?

MR. FINLEY: Objection on the basis of the expert stip.

MR. SCHWINGLER: I'm asking him why he limited his benchmark to 2005. I think that's a fair question.

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MR. FINLEY: Same objection.

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A. So in Paragraph 218, again, it says, "For the benchmark period, I use all the available data for the period before January 2009. Specifically, data in the benchmark period used for my regression analysis covers the period January 2005 through December 2008."

The variables in the regression -- in the production regression are the same as the variables in the overcharge regression, with the exception that the overcharge regression does add one variable, the Consumer Price Index.

My recollection is that that's as far back as I felt like the reliable available data were available.

- Q. Why did you include 2008 in your benchmark period?
- 18 | A. Well, let's --
- 19 MR. FINLEY: Same objection.
- 20 A. Paragraph 218, remember that I was -- I'll read it again.
- "I was instructed by counsel to use the period January 1, 2009 through June 30, 2018, as the damages period."

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25 And I'm not going to repeat -- I gave it

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twice, roughly -- those long answers about why I thought there was both econometric support and evidentiary support for why I think that period makes economic sense to me.

But your question now is why would I include 2008 in the benchmark period. And the answer is, it precedes the damages period. So I consider it as likely untainted by anticompetitive conduct.

- Q. Did hog producers on average make money in 2008?
- MR. FINLEY: Objection to form. Also objection on the basis of expert stip. And objection on the basis of scope.
- A. Your question is really vague. Did they make money? Yes, they certainly had revenues.

I'm not sure what you mean by "make money."

- Q. Did the hog producers -- did the prices hog producers realized selling hogs in 2008 exceed their cost of producing hogs in that year?
- 21 MR. FINLEY: Objection on the basis of the 22 expert stip.
  - A. My report doesn't offer an opinion about that.
    - Q. None of your opinions turn on whether hog

1 production was profitable in 2008. Correct? 2 MR. FINLEY: Objection, vaque and 3 ambiguous. Also object on the basis of expert 4 stip. 5 A. My report doesn't offer an opinion about 6 that. And one would also have to distinguish 7 short-run profits, long-run profits, accounting profits, economic profits. 8 But at any rate, my report does not offer 9 10 an opinion about the defendants' profits from the sale of pork products in 2008. 11 12 Q. Is the only reason you included 2008 in your benchmark period because it was the year 13 14 before the alleged conspiracy began? 15 MR. FINLEY: Same objection. 16 A. So we'll go back to Paragraph 218. I'11 read it again. 17 "I was instructed by counsel to use the 18 19 period January 1, 2009 through June 30, 2018, as 20 the damages period. For the benchmark period, I used all the available data for the period before 21 22 January of 2009. Specifically, data in the 23 benchmark period used for my regression analysis covers the period January 2005 through 24 December 2008." 25

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So as I said, the goal would be to identify a period of time for the benchmark that was unaffected by the disputed conduct.

And I believe that the econometric evidence and the production regression, the other evidence in the paragraphs I cited earlier, as well as the evidence in the complaint, supports the instruction I received about what period I should use as the damages period.

And then I believe it's appropriate to use as the benchmark period the period of time that just precedes the onset of the damages period and then working back from there.

- Q. Other than the fact that 2008 just precedes the alleged damages period, you're not relying on any analysis of industry factors for market conditions in 2008 that, in your opinion, support using it as a benchmark for analyzing the production that came in the years to follow. Is that fair?
- MR. FINLEY: Objection, asked and answered.
  - A. I don't think I'd agree with quite the way you're saying it.
    - What I testified earlier to was my report,

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1 for example, does not contain an opinion that there was -- obviously I'm not going to repeat 2 everything that's in Subsection III.B., which 3 4 relates to actions against the defendants' 5 unilateral self-interest in the absence of an 6 agreement. 7 But my report -- maybe I'll state it in the alternative. 8 My report does not offer an opinion that 9 10 2008 is contaminated by the disputed conduct. I believe that 2008 is an appropriate year to 11 12 include in the benchmark. 13 Q. And I'm not asking whether you think '08 14 is contaminated by the disputed conduct. I'm just 15 trying to understand what you're relying on in 16 selecting your benchmark period. So I understand it's a year before the 17 alleged conspiracy started. I understand you have 18 19 data available for that year. 20 Other than those two things, is there anything else about 2008 that you're relying on 21 22 when you select it as part of your benchmark? 23 MR. FINLEY: Same objection. A. Well, again, I'm not going to repeat the 24 long answers that I've given in the last couple of 25

minutes.

But the -- I believe it's appropriate to include 2008 in the benchmark because it's not in the damages period. It precedes the damages period, precedes the period used, for example, in the production regression.

I won't go through all of them, obviously, but the two different sets of paragraphs I cited earlier about evidence about communications, the information that's in the complaint.

As I said, so far as I'm aware, it is appropriate in the context of the production regression and the overcharge regression to use -- to consider 2008 as part of the benchmark period.

And as I said earlier, the goal would be -- is always in identifying a benchmark period to identify a period of time in which the disputed conduct was not present.

And so far as I know, the disputed conduct was either not present or certainly less present.

Again, it's preferable from an econometric perspective if there's no disputed conduct in the benchmark period.

Q. Is your production regression sensitive to including 2008 in the benchmark period?

MR. FINLEY: Objection. And I'm definitely going to object on the basis of the expert stip here since this does seem to ask for preliminary work product or alternate calculations if they were made. MR. SCHWINGLER: I'm going to be very clear about what I'm asking for. I'm not asking for preliminary models. I'm asking whether the model that he is offering is sensitive to inclusion of 2008 in the benchmark period. This is his opportunity to answer that question. If you're going to instruct him not to answer, you can do that. But my question is not about preliminary work. It's about whether his -the work he is relying on is sensitive to that variable. MR. FINLEY: And perhaps there are other ways he could answer this without reference to preliminary work. But it seems like one thing this -- the one salient thing this might call for is preliminary work. In other words, are you defining

"sensitivity" in a way that doesn't include

preliminary work, reference to preliminary work?

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done a sensitivity check to see if including 2008 1 in his benchmark period impacts the results in a 2 way that is meaningful to the case. 3 4 MR. FINLEY: Are you asking him whether 5 the sensitivity check is part of the report or 6 whether -- just whether he's done it? 7 MR. SCHWINGLER: Quite obviously he doesn't disclose a sensitivity check. So if you 8 want to instruct him not to give any information 9 10 that isn't in his report, that's your interpretation of the expert protocol, and we will 11 12 reserve our rights. This is his opportunity to defend his 13 14 I'm asking him if his model is sensitive to 15 including 2008 in the benchmark. 16 Obviously I can't force you to allow him But my -- I'll restart with the 17 to answer. I'll let you handle it as you see fit. 18 question. 19 BY MR. SCHWINGLER: 20 Q. Dr. Williams, is your production regression sensitive to including 2008 in the 21 22 benchmark period? 23 MR. FINLEY: And I will object based on 24 the expert stip since this question seems to be in reference to preliminary work product and possible 25

preliminary calculations.

A. My --

MR. FINLEY: The witness may answer to the extent he has a view independent of that.

- A. My report doesn't offer an opinion on that.
- Q. So your opinions -- your opinion that the production regression you disclose in your report is an appropriate method for analyzing the impact, if any, of the conspiracy on pork production net of net exports does not rely on any sensitivity check related to including 2008 in the benchmark period. Is that correct?

MR. FINLEY: Objection.

- A. I didn't say that. I said my report doesn't offer an opinion on that.
- Q. Well, if your opinion that this is an appropriate model relies on a sensitivity check, we're entitled to know that. So that's my question.

Is your opinion that this model is appropriate, does that rely on a sensitivity check that you performed but did not disclose in the report?

MR. FINLEY: Objection, form, vague,

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147 1 ambiguous. My report shows all the work on which 2 A. No. I'm relying. 3 4 Q. If defendants hadn't conspired to restrict 5 pork production starting in 2009, what would have happened to hog prices during your damages period, 6 as you define it? 7 Objection, calls for 8 MR. FINLEY: 9 speculation. 10 A. My report doesn't offer an opinion on that. 11 12 Q. Your report doesn't analyze but-for hog 13 prices. Correct? 14 MR. FINLEY: Objection, may 15 mischaracterize prior testimony. A. That's not what I said. 16 17 Q. I'm not trying to characterize what you I'm asking you a question. 18 19 Does your report analyze what hog prices would have been but for the alleged conspiracy? 20 Objection, vague, ambiguous. 21 MR. FINLEY: 22 If you're referring to the overcharge regression, that regression does 23 produce results that bear on but-for prices of 24

pork products.

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1 Q. Pork products. My question is about hog Does your report analyze what hog prices 2 would have been but for the alleged conspiracy? 3 4 MR. FINLEY: Objection, vaque, ambiguous. A. I don't believe my report offers any 5 6 opinions on that. Q. And your report also doesn't offer any 7 opinion on what hog production would have been but 8 for the alleged conspiracy. Correct? 9 10 MR. FINLEY: Objection, form. A. I believe that is correct. The production 11 12 regression looks at what production would have 13 been in the but-for world. Q. Pork production, not hog production. 14 15 Correct? A. That's what's specified in Paragraph 151. 16 Q. And specifically pork production net of 17 18 net exports. Correct? 19 A. That is correct. That is the dependent 20 variable in the production regression that appears in Table 3. 21 22 Q. Let's take a look at Paragraph 147 of your 23 report. So the last sentence of Paragraph 147 says, "The empirical quantification of impact, if 24 any, attributable to the alleged conspiracy 25

1 involves a comparison of actual quantities during the alleged conspiracy period with estimated, 2 but-for quantities in the absence of the alleged 3 4 conspiracy in that period." 5 Did I read that right? A. Yes, sir. 6 Q. And by "actual quantities," are you 7 referring to pork production net of net exports? 8 A. That is correct, since that is the 9 10 dependent variable. Q. In Paragraph 147, in the first sentence --11 12 sorry. Not in the first sentence. In the 13 sentence immediately above -- I apologize for 14 working backwards. 15 So you write, "The dummy variable." Do 16 you see that sentence? 17 A. Yes, sir. Q. "The dummy variable multiple regression 18 19 methodology implements the comparison described 20 above, in that it relies on comparing '[quantities] in the impact period to available 21 [quantities] before and/or after the alleged 22 period of impact,' while controlling for other 23 factors that affect quantities, e.g., hog costs or 24 adverse economic conditions." 25

1 A. My report doesn't offer an opinion about 2 that. Q. You would agree that in order to make 3 4 pork, you have to have a hoq. Correct? 5 A. That would be my understanding. Q. So do you dispute that hog supply impacts 6 7 the quantity of pork produced in the United States? 8 Objection, form. 9 MR. FINLEY: 10 A. I don't have a specific reason to dispute that. I'm just correctly noting that my report 11 12 doesn't offer an opinion. 13 Q. And your production regression does not 14 control for changes in hog supply, does it? 15 MR. FINLEY: Objection, form. 16 A. Well, it controls for a number of factors that affect -- related to that. 17 It controls for hog costs. 18 It controls for the plant costs of pork processing. 19 20 controls for the piglet loss rate. It controls for swine flu. 21 22 So it controls for a number of factors, all the factors that are listed in Table 3. 23 doesn't have a specific variable called "supply of 24 hogs." 25

1 Q. You don't use USDA data on how many hogs were actually produced between 2005 and whatever 2 the year was, 2020, as an input into your 3 4 production regression, do you? 5 A. That is correct. There's no independent 6 variable of what -- of the type that you're 7 describing now. O. There's also no independent variable that 8 accounts for changes in hog prices. 9 Correct? 10 MR. FINLEY: Objection, form. There's a variable -- there are 11 A. Yes. 12 related variables, but there's not a variable 13 that's specifically called "hog prices." Q. And Paragraph 25 of your report -- sorry 14 15 to jump around. It's on this topic. 16 MR. SCHWINGLER: It's on page 12, Caylob. 17 Q. So in Paragraph 25 you write, "The cost of acquiring live hogs -- be it from a packer-owned 18 19 farm, a contract farm, or the public market -- is 20 the most significant part of packing and processing operations, accounting for 21 22 approximately 70% of the total cost." 23 Did I read that correctly? A. Yes, sir. 24 25 Q. And you would agree with me that in

- circumstances where a packer buys a hog from a 1
- third-party producer, its cost of acquiring that 2
- hog would be the price it paid for the hog. 3
- 4 Correct?
- 5 A. That sounds right.
- Q. Does the total U.S. sow inventory affect 6 7 the quantity of pork produced in the United
- States? 8
- Objection, calls for 9 MR. FINLEY:
- 10 speculation.
- A. My report doesn't offer an opinion on 11
- 12 that.
- Q. And your production regression does not 13
- include a control variable for sow inventory. 14
- 15 Correct?
- A. That is correct. 16
- Q. Does the number of pigs imported from 17
- Canada affect the quantity of pork produced in the 18
- 19 United States?
- A. My report does not offer an opinion on 20
- that. 21
- 22 O. And your production regression does not
- include a control variable to address changes in 23
- 24 pigs imported from Canada.
- 25 A. That is correct.

Q. Does overseas demand for U.S. pork affect 1 the quantity of pork produced in the United States 2 net of net exports? 3 4 A. My report does not offer an opinion on 5 that. No. Q. Your production regression does not 6 include a control variable that addresses changes 7 in overseas demand for U.S. pork. 8 Correct? A. That is correct. 9 10 Q. Do changes in pork supply overseas, such as a disease outbreak in China, impact the 11 12 quantity of pork exported out of the United States 13 to other countries? MR. FINLEY: Objection, form. 14 15 A. My report does not offer an opinion on that. 16 Q. And your report does not include a control 17 variable to address changes in overseas pork 18 19 supply. Correct? 20 A. That is correct. MR. FINLEY: Objection. 21 22 Q. Do changes in currency exchange rates impact or affect the quantity of pork exported to 23 other countries? 24 25 Same objection. MR. FINLEY:

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A. My report does not offer an opinion on 1 2 that. Q. And your production regression does not 3 4 include a control variable to address changes in 5 exchange rates. Correct? A. That is correct. 6 O. Do changes in trade agreements between the 7 United States and other countries affect the 8 quantity of pork exported to other countries? 9 10 MR. FINLEY: Objection, form. A. My report does not offer an opinion on 11 12 that. 13 Q. Your production regression does not 14 include a control variable to address changes in 15 trade agreements over time. Correct? A. That is correct. 16 Q. If another country such as Russia lifted a 17 ban on pork imported from the United States, would 18 19 that impact -- sorry -- would that affect the 20 quantity of pork exported to that country? Objection, calls for MR. FINLEY: 21 22 speculation. 23 A. My report doesn't offer an opinion on 24 that. Q. And your production regression doesn't 25

include a control variable for changes to foreign 1 2 restrictions on pork imported from the U.S. 3 Correct? 4 MR. FINLEY: Objection. 5 A. That is correct. Q. I'm happy to go through each of them 6 again, if that would be helpful. 7 But am I correct that each of the items 8 that I've gone through and listed --9 10 And I'll just list them: hog supply, hog prices, sow inventory, pigs imported from Canada, 11 12 overseas demand for U.S. pork, currency exchange rates, changes in trade agreements, and import 13 14 bans. -- is it fair to say that you don't 15 include control variables for those factors in 16 your overcharge regression either? 17 Objection, form. 18 MR. FINLEY: A. That is correct. 19 20 Q. Let's talk about hog costs for a minute. And if you want to turn back to Paragraph 153. 21 22 don't know if I'll have questions on that 23 paragraph, but I know that's where we were. 24 What did you use as a -- as a proxy for the cost of raising a hog, for purposes of your 25

regressions in this case?

- A. I'll read the second sentence in Paragraph 153.
- "I obtained monthly data on estimated costs of producing hogs from farrow to finish (birth to 270 lbs) from Iowa State University (ISU) for the period from January 2004 to September 2021."

So the data came from Iowa State. And as it's described in the rest of the paragraph, "The total costs of production include feed and non-feed costs. Feed costs cover the costs of corn, soybean meal, dried distiller grain, complete feeds and other ingredients, and feed processing. Nonfeed costs are mainly on variable costs, fixed costs, and operating interests."

- Q. You used this variable in your overcharge regression as well?
- A. Yes, sir.
- Q. In both the production regression and the overcharge regression, did you use a three-month moving average for that Iowa State data?
  - A. I believe that's correct.
- Q. Would you agree with me that changes in corn prices impact hog prices?

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160 Objection, form. MR. FINLEY:

- A. There's no specific study of the relationship between corn prices and hog prices in my report.
- Q. Does the profitability of raising hogs impact hog supply?

Objection, form. MR. FINLEY:

- A. My report doesn't offer an opinion on that.
- Q. Your report contains no analysis of hog producer margins between 2009 and 2018. Correct?
- A. That is correct.

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- 13 Q. And it also doesn't analyze hog producer 14 margins before 2009 either. Correct?
- 15 A. That is correct.
  - Q. And your report contains no analysis of whether hog producer margins affected hog supply. Correct?
    - A. That is correct. My report does not offer an opinion on that.
- Q. Your report offers no opinion on whether 21 hog producer margins affected pork prices either. 22 23 Correct?
- My report does not offer 24 A. That is correct. 25 such an opinion.

- Q. And I should add that the list of 1 variables, there's no control variable in either 2 your production regression or your overcharge 3 4 regression that accounts for changes in producer 5 returns or margins for hog production. Correct? MR. FINLEY: I object to form. 6 7 A. I believe that's correct. I think "producer returns" is a little vaque. But there's 8 no variable that's looking at hog producers' 9 10 profits in those two regressions. Q. Let's go to Paragraph 151. I know you've 11 12 touched on this before. But just to level set the 13 four-year production regression, the dependent 14 variable is quarterly pork production net of net 15 exports. Correct? A. That is correct. 16 Q. And is it fair to say if exports go up, 17 all else equal, pork production net of net exports 18 19 will go down?
- A. That sounds right. Obviously the important thing is the "all else equal."
  - Q. Just basically getting at, for a given level of slaughter, if exports go up the dependent variable in your regression will go down, assuming everything else stays constant?

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A. I believe that's correct.

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- Q. And that's true regardless of which product is being exported. Correct?
  - MR. FINLEY: Objection, form.
  - A. Yes. Because the USDA is looking at all pork products.
  - Q. The fact that your production net of net exports will go down, all else equal, if exports go up is also true regardless of the reason why exports increased. Correct?
  - MR. FINLEY: Same objection.
- 12 A. I think what you're describing is just a reference here.
  - Q. Are you offering an opinion that export sales are made from pork produced exclusively for overseas customers?
- 17 MR. FINLEY: Objection, calls for 18 speculation.
- 19 A. My report doesn't offer such an opinion.
- Q. Suppose Smithfield breeds a sow tomorrow.
- 21 Are you offering an opinion of whether that sow is
- 22 being bred to produce hogs to make pork for

domestic production or exports or either?

- 24 MR. FINLEY: Same objection.
- A. My report doesn't offer any opinions about

remember exactly what kind of regression model we 1 2 I don't see anything in the paragraph you just read that would seem to conflict with my 3 4 report in this case. 5 Q. And the sentence I want to focus on begins 6 with, "The difference." 7 "The difference between prices in the damages period and the benchmark period is 8 commonly referred to as the overcharge." 9 10 And is that consistent with the approach you've taken in this case? 11 12 A. Well, it's not really -- I'm not trying to 13 quibble. You used the word "approach." 14 really just a word you're talking about. It is 15 commonly referred to as "the overcharge." 16 I mean, I did title Table 4 in my report. I didn't -- I gave the title of it as "Overcharge 17 18 Regression Results." I think it's consistent with

Q. Yes. So when we look at Table 4 of your report, the overcharge that you're reporting is the difference between prices in the damages period -- it's a comparison of prices in the damages period to prices in the benchmark period, obviously with some controls baked in. Correct?

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that.

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1 A. No. That's not really the right way to 2 say it. It's looking at data in the benchmark 3 4 period and the damages period and then it's using 5 a dummy variable to indicate the alleged damages. 6 And then the regression is calculated -- I'm 7 sorry. I'm hearing an echo. 8 O. So am I. If there's anybody who 9 MR. SCHWINGLER: 10 needs to go on mute, please do. A. Perhaps you could restate the question? 11 12 I have got distracted by the echo. Sorry. 13 Q. My question is, when you refer to an 14 overcharge in your overcharge regression, at a 15 high level, is that a comparison between the 16 prices in the damages period and the prices in the benchmark period? 17 A. You know, that's a -- it's not wrong to 18 19 say that. It's a little confusing because the 20 overcharge regression uses data from both periods. And in particular, it uses the observed 21 22 values of the independent variables in both the benchmark period and the damages period, but then 23

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it -- and again, this is all very standard.

uses the -- in the regression I've used, just a

1 dummy variable regression, it used a single dummy variable to ask, you know, is there, in fact, a 2 statistically significant difference between 3 4 actual prices and but-for prices. 5 But it's a little -- if somebody just 6 said, well, can you measure the overcharge by 7 simply comparing prices in the benchmark period to prices in the damages period, that's a little too 8 simplistic. 9 10 Q. I'm not trying to overly simplify. just trying to understand, when you run an 11 12 overcharge regression like this, what your results 13 tell you is, as this article states, "The 14 difference between prices during the damages 15 period and the bench period is commonly referred 16 to as the overcharge."

It's the difference in price between those two periods after controlling for the other variables.

MR. FINLEY: Objection to form.

- O. Is that correct?
- A. I think that's overly -- look, we were writing this article for a law review. It's not the way I would write it in an economics journal.

It's naive to say that the overcharge can

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It uses data from both periods, utilizing in particular the methodology that's described in the sources I list in Footnotes 214 and 215.

So that would be the "ABA Section of
Antitrust Law," "Proving Antitrust Damages: Legal
and Economic Issues, Chapter 6," as well as the
article as I mentioned earlier by Professors
McCrary and Rubinfeld called "Measuring Benchmark
Damages in Antitrust Litigation." That was
published in the "Journal of Econometric Methods."

It's also -- the same dummy variable methodology is discussed in the ABA Section of Antitrust Law in a book called "Econometrics:
Legal, Practical, and Technical Issues."

So this is a very standard dummy variable model that is utilizing data from both the benchmark period and the damages period and asking the question, is there a statistically significant difference between actual and but-for prices in that period, namely January 2009 through June 2018, controlling for all of the variables that appear in Table 4?

That's what the regression is testing.

And the answer is, in the regression as reported in Table 4, yes, there is a statistically

significant difference between those actual and but-for prices in the period January 2009 through June 2018. And in percentage terms, the common overcharge is 10.3 percent.

Q. Do you disagree with the statement that a dummy variable regression methodology relies on comparing prices in the impact period to available prices before and/or after the alleged period of impact?

MR. FINLEY: Objection, form.

- A. No. It's a little oversimplified. But certainly that's part of it. It's using data from both a benchmark period -- and there may be more than one benchmark period. There's some times people use an after period as well. Mine uses a before, during model.
- Q. And I would hope you wouldn't disagree with that because that's a direct quote from your report in Paragraph 206.

All I'm trying to establish is that the regression, at a high level, is a comparison of prices in one period to prices in another while controlling for other factors that affect prices other than the conspiracy.

Do we have a disagreement on that basic

191 1 concept? 2 Objection, form. MR. FINLEY: I mean, I've answered this three 3 A. Yeah. 4 times now. 5 But as I've said, I don't specifically disagree with the way you're phrasing it. 6 would be naive and incorrect to simply say that 7 the overcharge can be measured directly by 8 comparing prices in the before period to prices in 9 10 the during period. That would not be correct. But it certainly is correct that the 11 regression utilizes data from both a benchmark 12 13 period and a damages period, in the context of 14 this multivariate regression, with a dummy 15 variable for the alleged damages period. 16 And it's absolutely correct that it utilizes data and relies on data from both the 17 benchmark period and the damages period. 18 19 Q. You stand by the statement in 20 Paragraph 206 of your report. Correct? 21 MR. FINLEY: Objection, form. 22 A. Could you -- I believe so. But could you 23 just show me the sentence you're talking about? 24 Q. It's page 99. Let's go to Exhibit 1, page 99, Paragraph 206. 25

pork production at different periods of time 1 within the years 2009 to June 2018? 2 MR. FINLEY: Objection, form, vaque, 3 4 ambiguous. 5 A. My report doesn't offer any opinion on 6 that. 7 Q. So you have no opinion one way or the other on whether the conspiracy could have had 8 different impacts at different times within the 9 10 damages period? Hold on. Objection, form, 11 MR. FINLEY: 12 vaque, ambiguous, may mischaracterize prior 13 testimony. A. My report doesn't offer any opinions on 14 15 that. Q. So your interpretation of your overcharge 16 regression I take it does not rely on any 17 assumptions or opinions about whether defendants' 18 19 conduct had different impacts at different points 20 in time in the alleged conspiracy. Correct? MR. FINLEY: Same objection. 21 22 I think that's correct. My -- the 23 overcharge regression, as it says in Paragraph 12, 24 assumes that the allegations in the complaint are

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true.

And then it asks the question as to whether or not there is a difference between the actual prices and the but-for prices in the alleged damages period January 2009 through June 2018.

And I've concluded that the answer to that question is yes.

Q. If you look at page 149 in your report, this is in your appendix of documents relied upon.

There is an article about halfway down the page from Dr. Rubinfeld, contained within the "Reference Manual on Scientific Evidence." Do you see that?

A. Yes, I see that.

Q. Page 322 of that chapter, Dr. Rubinfeld wrote, "The issue of robustness, whether regression results are sensitive to slight modifications and assumptions, e.g., that the data are measured accurately, is of vital importance."

Do you agree with that statement?

MR. FINLEY: Objection.

A. I don't have his article in front of me and I don't know the exact context in which he's writing that. It doesn't sound -- it sounds plausible to me.

Q. And I can't remember. I know I asked you these questions about your production regression. I'm drawing a blank on whether I asked as to the overcharge. So apologies if we're double-dipping here.

Did you run any sensitivity checks on the overcharge regression that you report -- that you disclose in your report?

MR. FINLEY: Sure. And so the question has changed. I'll object on the basis of expert stip to the extent this is calling for calculation that is not shown in the report or relied upon.

- A. So the only overcharge regression that I'm showing in my report is the one shown in Table 4.
- Q. And you're not defending this overcharge report -- the overcharge regression that you disclose in your report on the basis that it is not sensitive to slight modifications and assumptions. Is that fair?
  - MR. FINLEY: Objection, form.
- A. I would say that what I'm relying on are the analyses that I've undertaken to perform the overcharge regression results. And that's -- and all of the bases for that, all of the facts, all of the data, all the modeling, that is all

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So the pass-through elasticity -- do you see that in Table 5? For example, for REDACTED, do you see the REDACTED?

Q. Yes.

A. So that's the number that comes out of the regression. So remember, we're regressing -- it is a log-log regression. So it's an elasticity.

So the regression is giving us back that REDACTED number. We then multiply -- to get the pass-through rate, we multiply the pass-through elasticity by that variable called the price-cost ratio.

So as I said earlier, if we take the pass-through elasticity for REDACTED of REDACTED, multiply it by the cost-price ratio of Percent, that's what gives us the pass-through rate of REDACTED percent.

Q. So let's just stay with Sysco for a minute. If the average direct -- sorry.

If the direct purchaser overcharge from your overcharge regression is REDACTED percent and Sysco has a pass-through elasticity of REDACTED and a pass-through rate of REDACTED percent, would you expect to see overcharges of close to REDACTED percent for REDACTED customers?

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Objection, form. 1 MR. FINLEY: MS. JONES: 2 Objection. I got a little bit lost in 3 A. I apologize. 4 your question. 5 Could you read it back, please? 6 Q. If the direct purchaser overcharge from your overcharge regression is REDACTED percent, 7 pass-through elasticity is just under 🖺, 8 percent, would pass-through rate is just over 9 10 you expect to see an overcharge for 11 customers of in the neighborhood of percent? 12 MR. FINLEY: Objection, form. 13 COUNSEL: Objection to form. 14 A. I think the short answer is yes. That is 15 the estimated pass-through rate. Again, if we look at the last sentence in 16 Paragraph 256, the "estimated pass-through rates 17 can be multiplied by the estimated overcharge 18 percentages" -- I see I put an S on that. 19 20 really just should have been singular. You were "discussed 21 I was referring to the 22 above to determine the overcharge percentages for CIIPP Class Members." 23 24 So that's the implication of the pass-through rate for 25

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Q. There were three distributors where you 1 2 applied your overcharge regression model to the 3 data for those specific distributors. Correct? 4 MR. FINLEY: Objection, form. 5 A. Yeah. I believe you're referring to -we're now on page 122, in Romanette iii, which 6 says, "Common impact regressions." 7 And so I believe you're referring to the 8 regressions that are in Paragraphs 271, 272, and 9 10 273. 11 Q. That's correct. I may have been able to 12 frame it more artfully. 13 But what you say in Paragraph 269, "To test whether all or virtually all CIIPP Class 14 Members paid higher prices for pork products 15 during the damages period than they would have 16 paid but for Defendants' alleged conspiracy, I 17 apply my overcharge regression model described in 18 Section IV.A to distributors with sufficient sales 19 20 data to estimate overcharges. These distributors and K 21 Ιs 22 that right? 23 A. Yes. You read that correctly. 24 Q. When you say "I apply my overcharge 25 regression model to those three distributors,"

what does that mean?

A. Well, I mean, I think the words are pretty clear. I don't know how else to say it. I applied the overcharge regression model that we looked at in Table 4 to the individual distributors, one at a time:

and was REDACTED

Those distributors had information that allowed me to look at the sales to individual customers. And so that's part of my analysis that appears in Section IV.C that is common impact analysis. So that's what I mean by applying the overcharge regression model in Section IV.A.

And of course, as you are aware, we provided you with all of our data and stated code. So I would hope there would be no confusion about what exactly these regressions are.

Q. No confusion. I'm just trying to make sure we're on the same page for some questions.

Just so I understand, when you apply your regression model to **REDACTED**, for example, does that mean the prices **REDACTED** customers paid are the -- is the dependent variable as opposed to all prices by all customers?

A. I think I understand your question. I

And their quote out of their Michigan Law Review article was, "modern cartels are more focused on monitoring, communication, and redistribution so as to prevent cartels" -- I'm sorry -- "so as to prevent breakdowns in cartel discipline than on some punishment."

- Q. In order to successfully monitor and punish noncompliance with a cartel, does the information the members of the cartel use for monitoring have to be accurate?
- MR. FINLEY: Objection, form, lack of foundation, calls for speculation.
- A. My report doesn't offer a specific opinion about that.

Remember that the point to this whole discussion is that -- remember we're in section -- that we're in Subsection III.B. of the report, which asks the question, did the defendants take actions that were against their unilateral or independent self-interest but for the existence of a conspiracy.

So the analysis that's in these paragraphs is about that. It's about did the firms in fact engage in conduct that will be against their unilateral self-interest but for the existence of

a conspiracy.

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The analysis in these paragraphs is not about the optimal way to run a cartel. And my report doesn't have any specific opinions about the optimal mechanisms firms use to run cartels other than, as I said, it generally -- this discussion that we're looking at right now in Paragraph 186 about generally what do cartels attempt to do.

And again, with the important contribution from Professor Kovacic, et al., about what modern cartels attempt to do.

- Q. You're not offering an opinion that Agri Stats in fact facilitated monitoring and enforcement by the defendants in this case. that fair?
- 17 MR. FINLEY: Objection, form, may mischaracterize prior testimony.
  - A. I don't believe my report offers an opinion that says that. The discussion of Agri Stats really is in the vein I just described earlier. It's about whether or not there's evidence that the firms took actions that were against their unilateral self-interest in the absence of an agreement.

1 Q. Is it your opinion that Agri Stats 2 facilitated collusion between defendants? Objection, form, scope. 3 MR. FINLEY: 4 A. My report doesn't offer a specific opinion 5 that says that. Again, we talked about Paragraph 183. 6 7 whether or not someone would regard 183 as evidence that Agri Stats facilitated an alleged 8 agreement, I suppose that would be up to the 9 10 person reading Paragraph 183. I certainly stand by what's in Paragraph 183. 11 12 Q. You say in Paragraph 185, you refer to 13 "information sharing through Agri Stats." 14 And then the second sentence says, "Such 15 information sharing can facilitate collusion 16 because the detailed knowledge that Defendants gained regarding their competitors' pricing and 17 production decisions is the type of information 18 19 that would be useful for coordinating price 20 increases and/or production decisions, including production cuts, among firms." 21 22 Did I read that correctly? 23 A. I believe so. Q. So can you give me an example in this case 24 where two or more defendants used information from 25

1 Agri Stats to coordinate their production of pork? A. I don't believe --2 MR. FINLEY: Objection, form. 3 4 A. I don't believe my report offers such an 5 opinion. Again, the point to these paragraphs is to ask the question did -- particularly in the 6 context of information exchanges related to 7 Agri Stats, did the firms engage in conduct that 8 was against their unilateral self-interest in the 9 10 absence of an agreement. That's what's being 11 discussed here. 12 My report doesn't offer a specific opinion 13 about the -- about your specific question. Q. So when your report says Agri Stats would 14 15 be useful for coordinating production decisions, 16 you're not -- that's a sort of hypothetical You're not opining that in fact 17 observation? defendants used Agri Stats to coordinate 18 19 production? 20 Objection, form. MR. FINLEY: A. I don't know that I'd agree with the way 21 22 you're stating that. The whole discussion of Agri Stats is, in 23 my opinion, demonstrating that the firms --24 including Agri Stats itself, as discussed in 25

double-check the IBISWorld report to see what the first date is, what the first year is in their data.

Q. I'd like you to turn to -- let's set aside
Exhibit 1 and take a look at Exhibit 2, which is
the complaint. And I'd ask you to look at
Paragraph 85.

Paragraph 85, which is on page 31, reads,
"Each of the Defendants further controls the
manner in which pork is processed and has the
ability to restrict and reduce supply through a
number of means including capacity reductions,
controlling slaughter rates, and exports."

Did I read that right?

A. Yes, you did.

- Q. Are you assuming that allegation to be true?
- 18 MR. FINLEY: Objection, form.
- A. Yeah. I don't have a specific reason for disagreeing with it.
  - Q. Do you have an understanding of what the term "controlling slaughter rates" refers to?
  - A. I'm not sure other than number of hogs slaughtered per day, for example. I'm not sure what else it would be referring to, the rate at

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which hogs are being slaughtered over time.

- Q. Paragraph 85 also refers to "capacity reductions." What does it mean for a defendant to reduce capacity?
  - MR. FINLEY: Objection, form.
- A. My report doesn't talk about capacity reductions. I'm not sure exactly what it would mean here to reduce capacity. I mean, it could be mothballing a plant would be a capacity reduction. As I said, my report doesn't talk about that.
- Q. Your report contains no analysis of what slaughter capacity would have been but for the alleged conspiracy. Is that correct?
  - MR. FINLEY: Objection to form.
- A. Yeah. If we look at Table 2 in my report on page 37, that has the "U.S. Daily Hog Slaughter, Capacity 2009-2020, by Company."

There's no -- there's not another table in my report that has different but-for values for hog slaughter capacity.

Q. For purposes of analyzing the impact of the alleged conspiracy on pork prices, are you assuming that but for the conspiracy, defendants would have increased their slaughter capacity more than they did?

MR. FINLEY: Objection, form, vaque, 1 ambiguous, calls for a legal conclusion, calls for 2 speculation. 3 4 A. Well, I'll just come back again to the 5 first sentence in Paragraph 12. "For the purpose of estimating overpayments, if any, caused by 6 Defendants' alleged conspiracy, I have assumed 7 that the allegations in the Complaint are true." 8 And then, of course, that leads to the 9 10 analysis that we've talked about at length today 11 in Paragraphs 205 through 226 and the overcharge 12 regression in Table 4. 13 So that, again, as any damage expert must, 14 I'm assuming that the plaintiffs' claims are 15 correct as they pertain to the alleged conspiracy. So there's no -- there's no -- for 16 example, there's no capacity variable in the 17 overcharge regression. 18 19 But again, I do agree that I am assuming, as I said, as any damage expert must, that the 20 plaintiffs' claims as they pertain to the alleged 21 22 conspiracy are true. 23 Q. Are you assuming that defendants 24 restricted slaughter capacity as part of the conspiracy? 25

to purchase \$50 million of pork products derived 1 from sows as a means of reducing the national herd 2 and stabilizing pork prices? 3 4 MR. FINLEY: Objection to form. Also 5 objection on the basis of the expert stipulation. A. I don't specifically remember that right 6 7 It's certainly not something I'm relying on. Q. Do you view actions by the USDA to be part 8 of a conspiracy? Let me ask it differently. 9 10 Are you -- do you understand -- are you assuming for purposes of your analysis that 11 12 actions by the USDA are part of a conspiracy? 13 MR. FINLEY: Objection, form, calls for a 14 legal conclusion, calls for speculation, lack of foundation. 15 A. I don't recall the complaint alleging that 16 the USDA was part of the alleged conspiracy. 17 unless I'm misremembering it, I think the answer 18 19 to your question would be no. 20 Q. Your report contains no analysis of whether actions by the USDA to reduce sow 21 22 inventories had any impact on pork prices during 23 the damages period. Correct? Objection, form, lack of 24 MR. FINLEY: foundation, vague, ambiguous, may call for a legal 25

conclusion.

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2 MR. SCHWINGLER: Let's take those one at a 3 time. What's vaque about my question?

MR. FINLEY: It's unclear what actions we're talking about, supposed actions by the USDA.

MR. SCHWINGLER: I'm asking whether his report contains analysis of any actions by the USDA. Let me ask it in a nonleading way.

- Q. Dr. Williams, does your report contain any analysis of actions by the USDA related to sow inventories or pork prices?
- A. I don't specifically recall that. If there were actions taken by the USDA that affected, for example, pork production, the dependent variable would pick that up in the production regression.

But I don't -- and I don't have time to reread the whole report right now. But I don't recall anything in the report about a specific USDA policy, for example, that's analyzed in my report as pertains to hog production. I don't recall them.

Q. What's the --

MR. FINLEY: If I may ask, what's the time on the record? I think we're pretty close to the

300 1 end. THE VIDEOGRAPHER: 1 hour and 18 minutes 2 on this session. 3 4 MR. FINLEY: What's the total, if I may 5 ask? THE VIDEOGRAPHER: Two more minutes for 6 7 seven hours on the record. MR. SCHWINGLER: Two more minutes for 8 seven? 9 Uh-hmm. 10 MR. FINLEY: 11 THE VIDEOGRAPHER: Sorry. It's one, eighteen. So it's been seven hours on the record. 12 13 MR. SCHWINGLER: Let's just go off the record for a second. I want to make sure we're 14 15 straight on this. 16 THE VIDEOGRAPHER: The time is -- sorry. The time is 4:09. We're going off the record. 17 (Off the record 4:09 p.m. to 4:10 p.m.) 18 19 THE VIDEOGRAPHER: The time is 4:10, and we are back on the record. 20 MR. SCHWINGLER: So we've reached our 21 22 seven hours, Dr. Williams. I'm not going to have 23 any other questions for you. 24 I am going to note for the record defendants reserve their rights as to plaintiffs' 25

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